# 30th Environmental and Energy Symposium & Exhibition

## Air Program Information Management System (APIMS): From CCS to EESOH-MIS

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EESOH
Enterprise Environmental, Safety & Occupational Health

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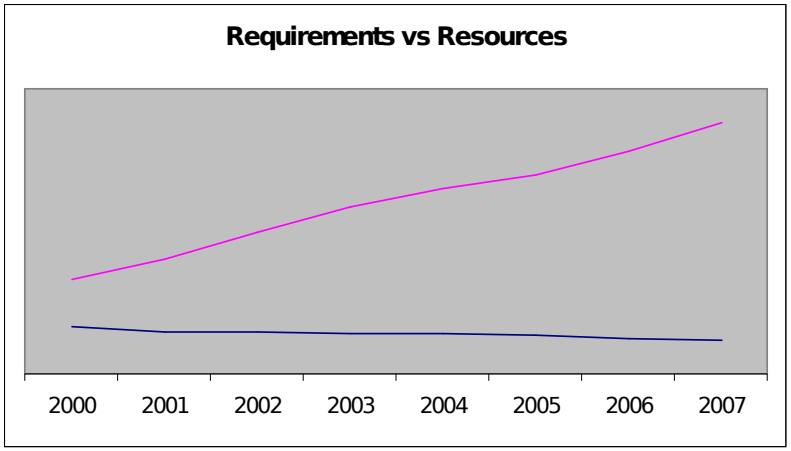
# Air Quality Challenges

- Requirement Growth
- Emission Inventories
- Permits & Permit Limits
- NSR/PSD Reviews
- Conformity
- Title V, NESHAP
  - Material Phase Out
  - Self Regulation
  - Inspections
  - Certifications
- Class II ODS Management
- Area Source Categories
- Urban Air Toxics
- 8 Hr Ozone & PM 2.5 Stds
- More & More Record keeping




## Declining Resources

- Manpower
- Turnover
- Funding Constraints
- A-76 Studies

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# Air Is The Greatest Risk

| | Criminal Penalties | Civil Penalties | Administrative Penalties | % of Total Amount |
|---|---|---|---|---|
| CAA | $25,315,683 | $55,154,441 | $4,006,848 | 38.4% |
| CERCLA | $16,742,004 | $2,220,000 | $143,170 | 8.7% |
| CWA | $38,216,603 | $17,984,220 | $5,353,442 | 28% |
| EPCRA | $15,000 | $12,957 | $3,515,780 | 1.6% |
| FIFRA | $128,505 | $0 | $1,600,081 | 0.8% |
| RCRA | $1,611,479 | $25,981,539 | $5,554,194 | 15.1% |
| SDWA | $8,000 | $469,000 | $582,766 | 0.5% |
| TSCA | $357,336 | $0 | $3,025,983 | 1.5% |
| Other | $12,331,673 | $0 | $0 | 5.6% |
| Totals | $94,726,283 | $101,683,157 | $23,782,264 | 220,191,704 |

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# Visions for APIMS

- **Air Force Vision for APIMS/CCS**
  - **Create a World-Class Integrated Environmental, Safety,**

    **and Occupational Health "System of Systems"**
    - **Develop federal, state, and local regulatory reports**
    - **Identify health trends**
    - **Provide environmental management tools**
    - **Provide pollution prevention management tools**
    - **Facilitate operational risk management**

  - **Drastically reduces Costs by sharing information**
  - **Reduce operational costs by making better decisions**

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# What is APIMS

- A primary component of Command Core System (CCS)
  - An integrated relational database designed to manage environmental, safety, and occupational health datasets
- APIMS is an air quality management tool that was designed to be flexible for use at any installation
  - Track and prepare Air Emission Inventory
  - Regulatory Compliance
  - Permit, Title V, NESHAP
  - Automated Logs
  - Checklists
- Sharing the Data among Different Functional Areas
  - More Efficient
  - Reduces Cost
- One of the primary modules for EESOH-MIS

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# Major Benefits of APIMS

- **Consistent Air Program Information Reducing:**
  - **AEI Reporting Cost**
  - **Training and Certification Expenses**
  - **Redundant Data Collection**
  - **Administrative Burden**

- **Validated and Standardized Information to support:**
  - **P2 Opportunities**
  - **Regulatory Opinions**
  - **Congressional Data Calls**
  - **Risk Analysis**

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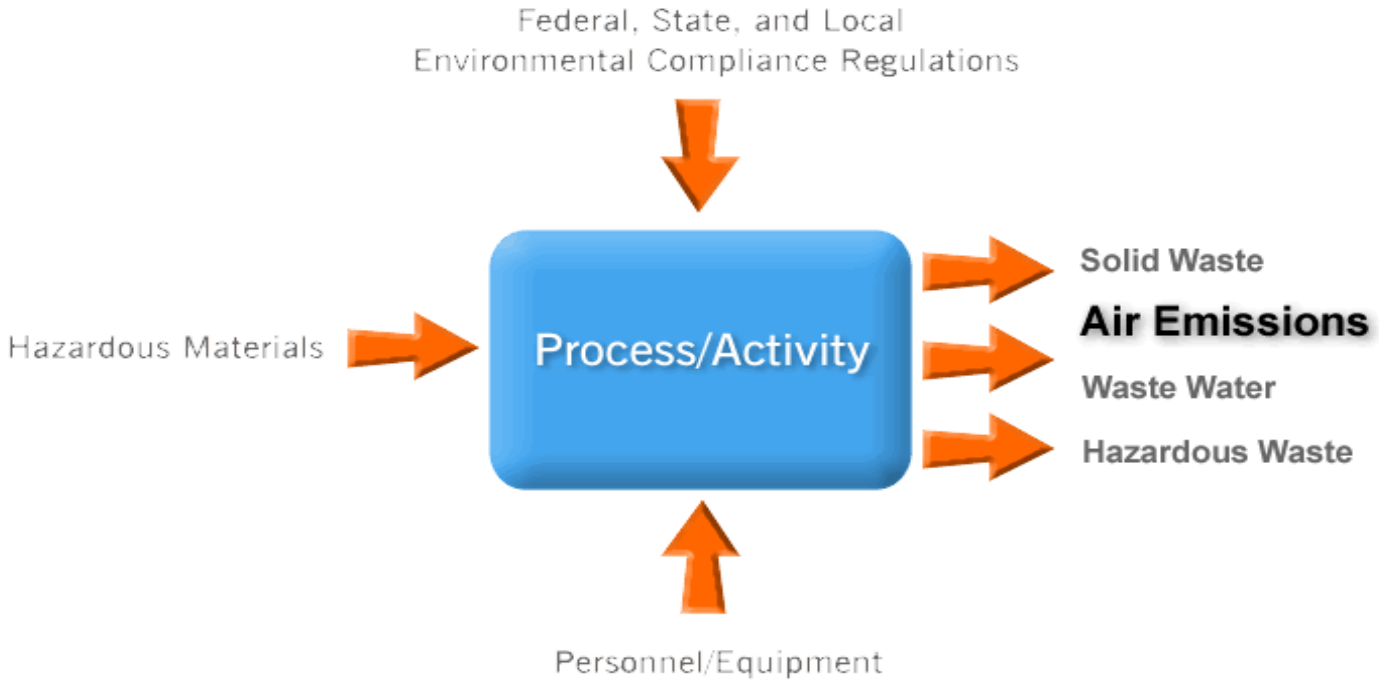
# The Process Is Key



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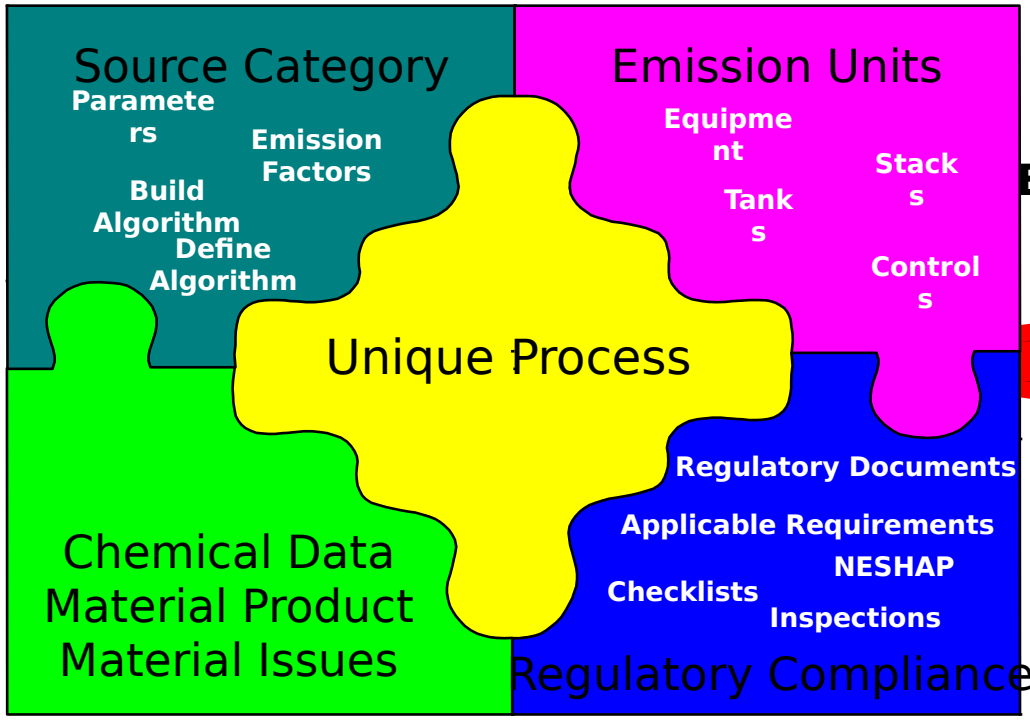
# Building Blocks Of Data




**Annual Air Emission Inventory**

**Compliance**

**Air Management Tool**
**Data Manipulation**
**Custom Reports**

***One Source of Data to Multiple Compliance Repor***

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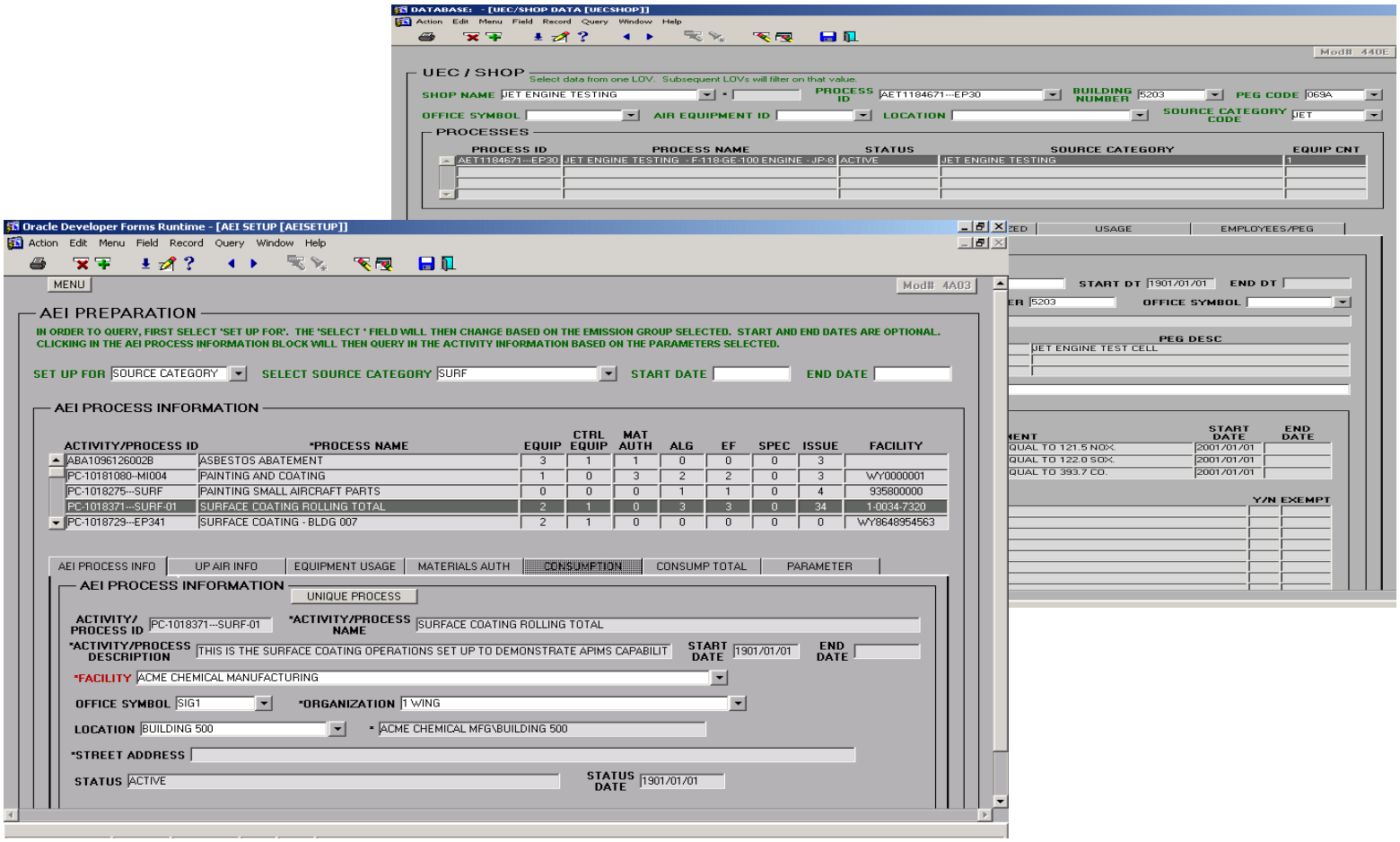
# APIMS Simplifying Data Collection




NORTHROP GRUMMAN Mission Systems

EESOH Solutions

## *Single Point Data Collection and Manageme*

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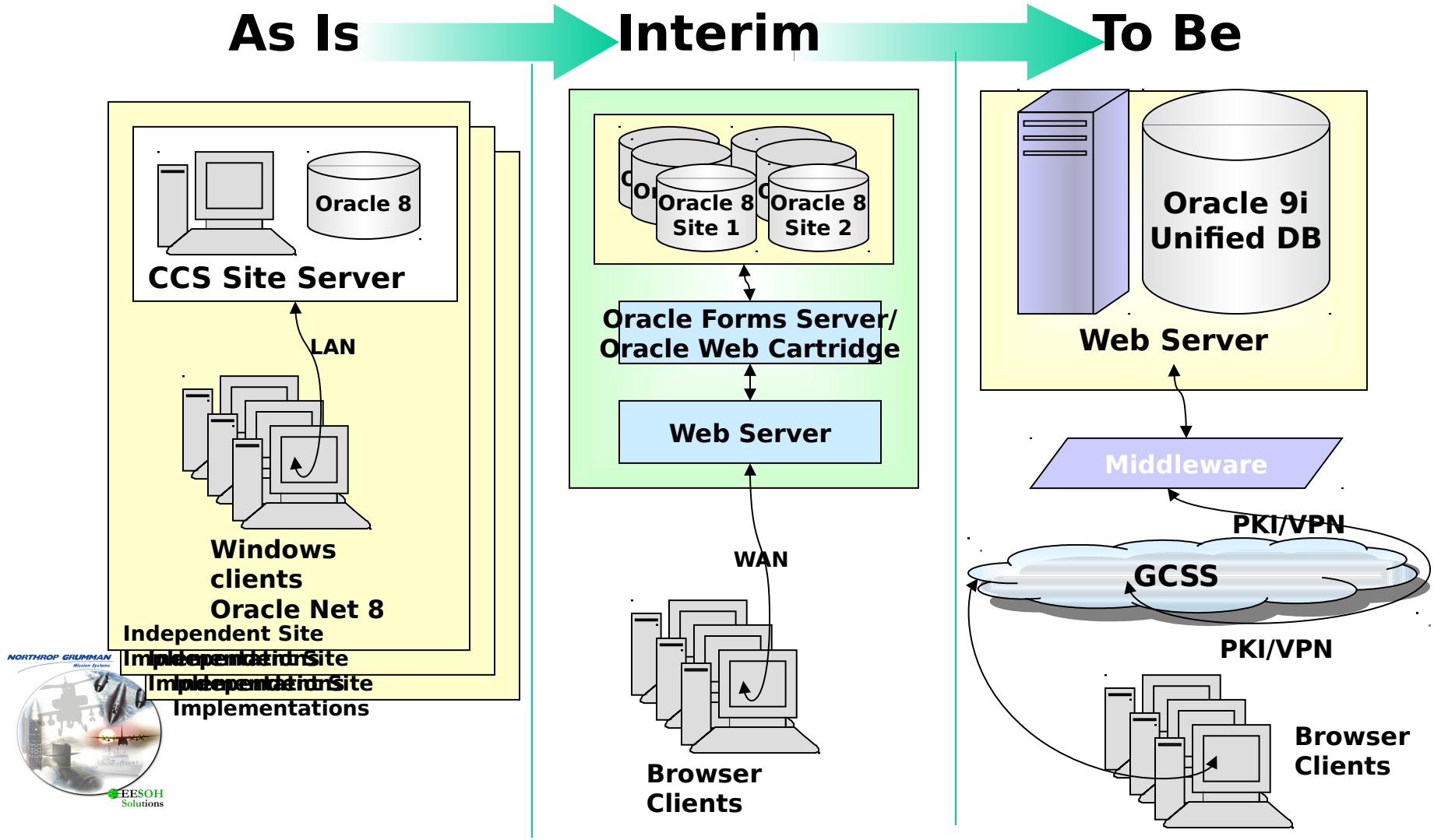
# The Future Is Now



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# EESOH-MIS Overview

- **Enterprise Environment, Safety, & Occupational Health Management Information System (EESOH-MIS)**
  - **Previously Automated Civil Engineering System Environmental Module (ACES-EM)**
- **Phased development/deployment of 18 environmental applications**
- **Intended to integrate with other ACES modules**
  - **Operations**
  - **Fire Department**
  - **Housing Management**
  - **Real Property**
  - **Program Management**
  - **Other modules…**

***Part of the Air Force Modernization Prog***

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# EESOH-MIS Overview

- **EESOH-MIS**
  - Focused on improving and standardizing business practices
  - Integrated, multimedia system vs. multiple “stovepipe” systems
  - Internal and external Air Force Interfaces
- **EESOH-MIS will be a revolutionary, not evolutionary change in the way the Air Force does business**
  - Is NOT an incremental adaptation and interfacing of existing legacy systems
- **Strategic goals**
  - Integrated solution
  - Adaptable
  - Standardized
  - Supports shared information

EESOH
Enterprise Environmental, Safety & Occupational Health

# Integrating Functional Stovepipes

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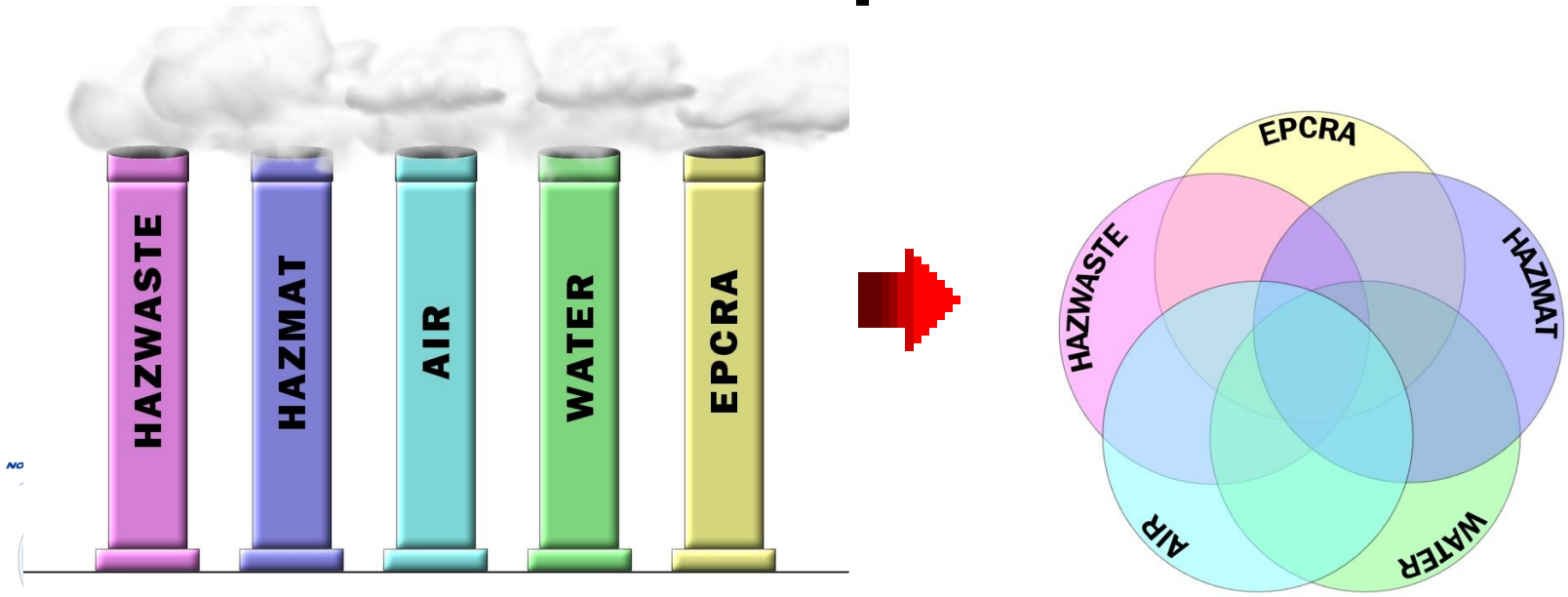
# Integration – What it Means

- Common data set
- Activities/Requirements/Functionality
- Identifies overlap – eliminates



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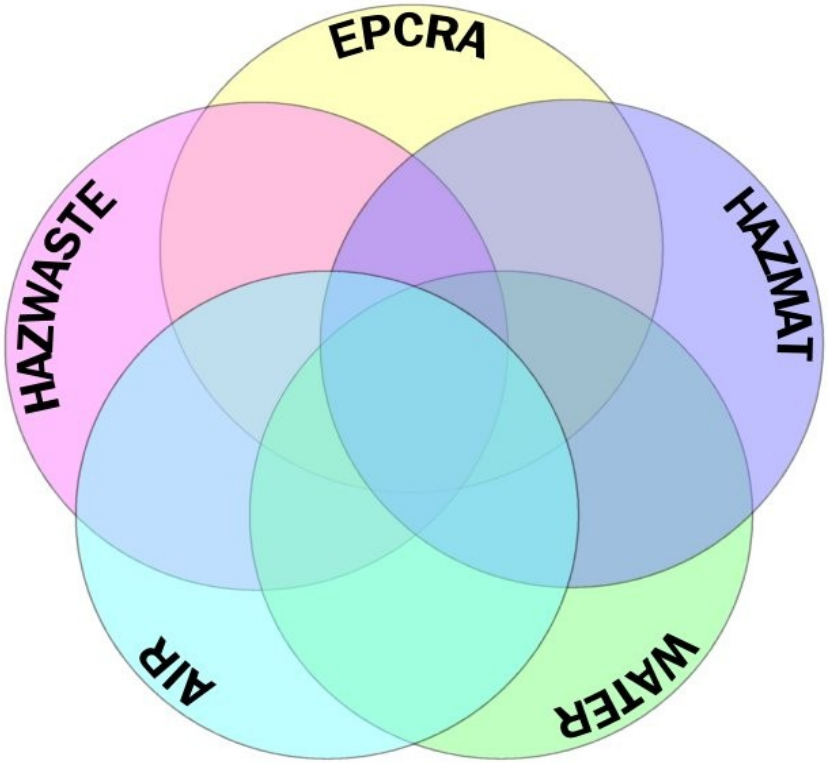
# Finding the Common Ground



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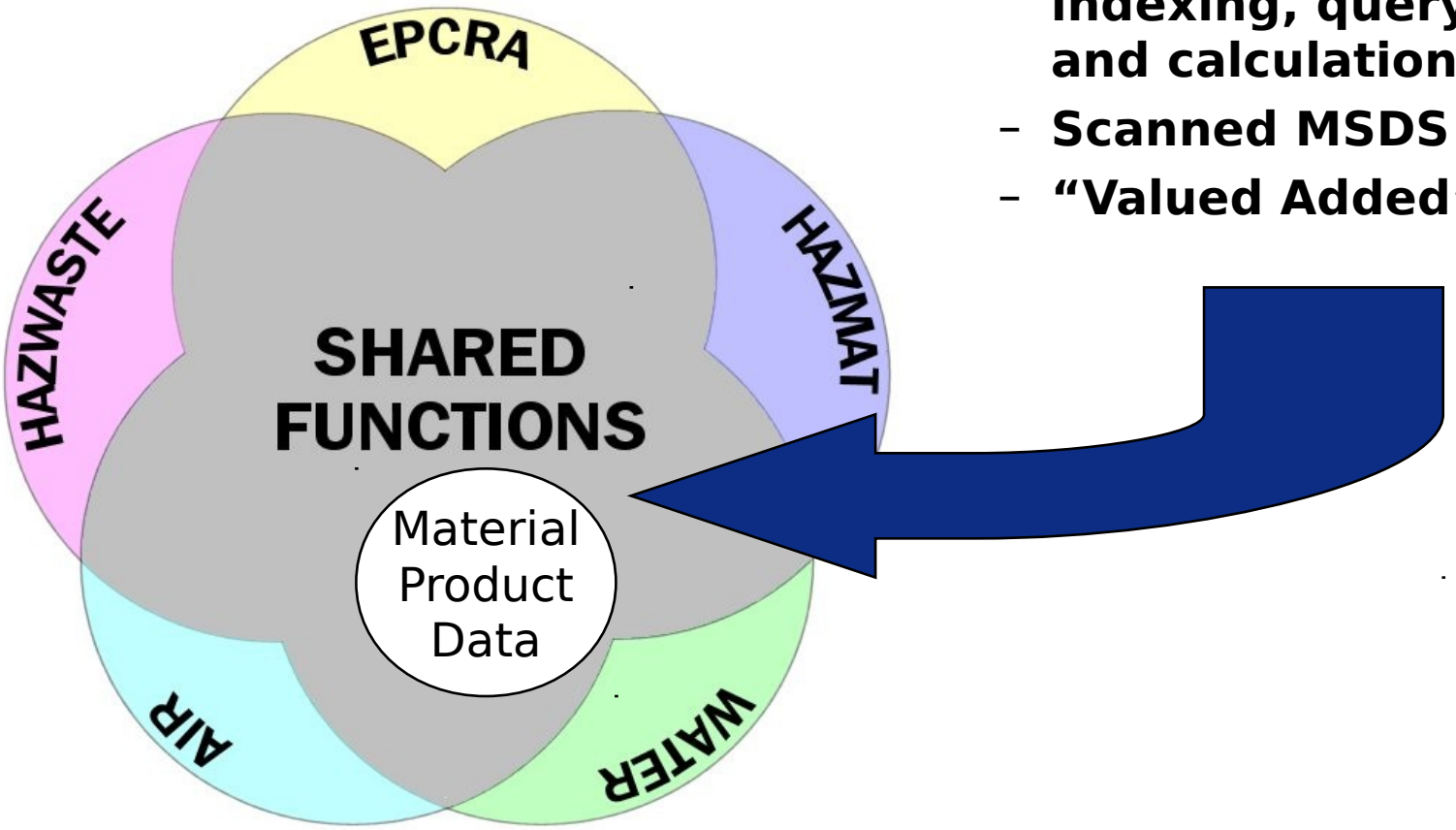
# Defining the Common Data Set

- **Material Product Data**
  - **Metadata required for indexing, querying, and calculations**
  - **Scanned MSDS Image**
  - **“Valued Added” Data**



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# One View to a World of Information

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# Data – Information – Knowledge – Power

***ESOH-MIS***

***ESOH-MS and EMS***

Moving Data Into Information To Knowledge

Management Awareness

## Knowledge Management

Mission Impact Assessment
EMS Metric Management
Cross Facility Comparison
Regulatory Impact Assessment

## Information Management

Air Emission Inventory
Rolling Emission Totals
NESHAP Compliance
Conformity Analysis

Inspections and Oversight
Process Improvement
Permit Compliance Reports
Permit Applications

## Data Collection and Standards

Process/Aspect Definition
Impact/Hazard Definition
Material Information
Facility Definition

Organization Definition
Source Definition
Regulatory Definition
Compliance Definition

Permit Constraints
Checklist Requirements
Operations Logs
Training Records

# EESOH Installations Worldwide

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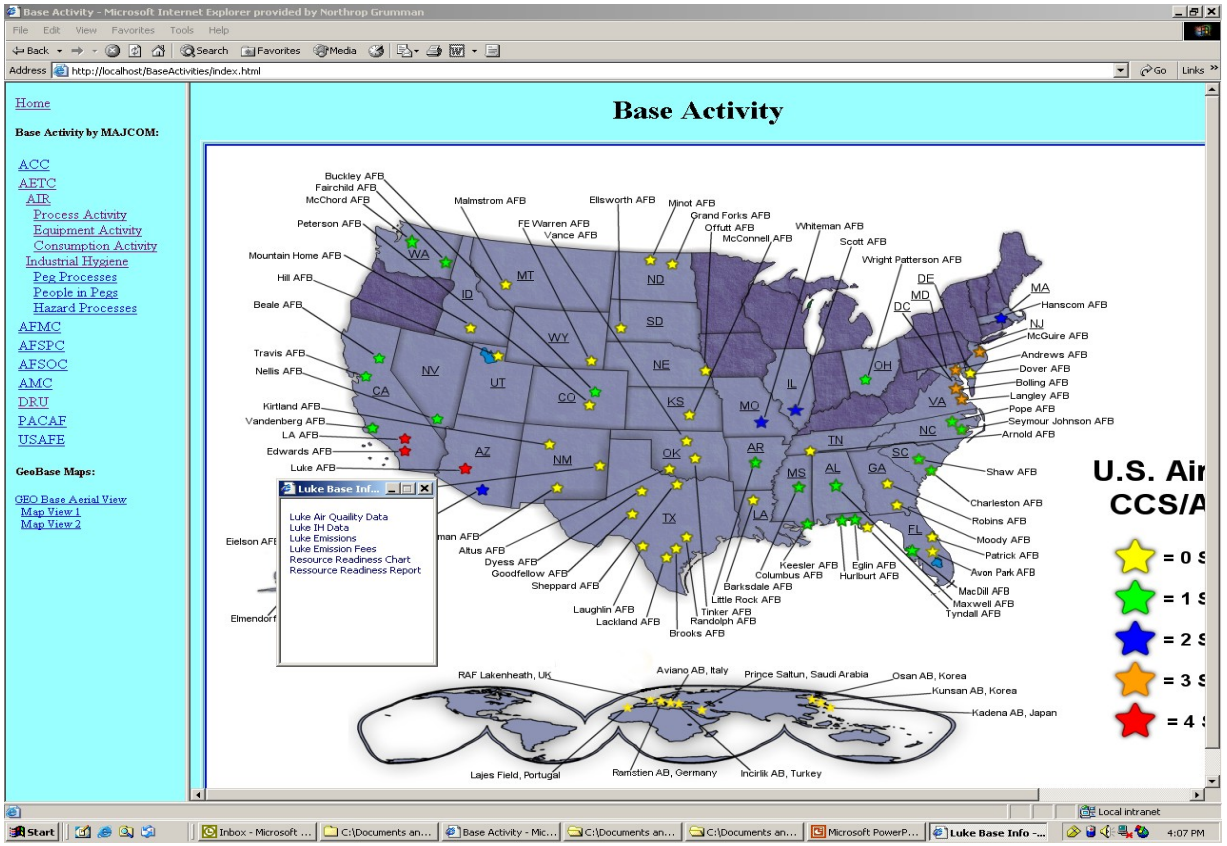


***Direct read from active EESOH systems to generate Resource Capability Metrics***

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# Knowledge Based Management

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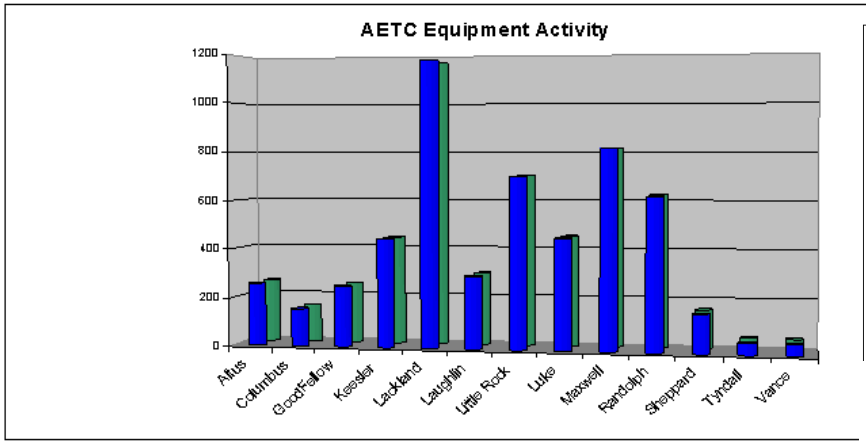
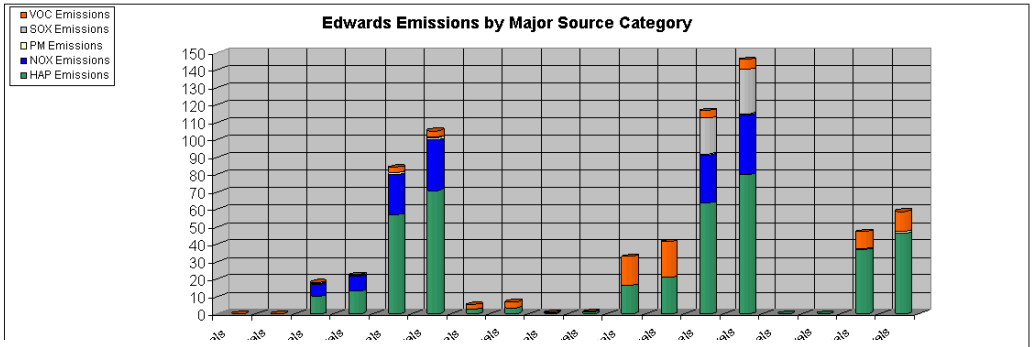



| | Altus | Columbus | GoodFellow | Keesler | Lackland | Laughlin | Little Rock | Luke | Maxwell | Randolph | Sheppard |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment | 256 | 152 | 248 | 444 | 1169 | 297 | 702 | 462 | 814 | 625 | 16 |
| Total Equipment | 256 | 152 | 248 | 444 | 1169 | 297 | 702 | 462 | 814 | 625 | 16 |
| Average Usage Since Imp | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 10 |
| Dates as of Final Imp Training | 9/1/01 | 8/4/01 | 5/3/01 | 6/16/01 | 4/5/02 | 2/28/01 | 6/17/00 | 10/2/02 | 4/20/01 | 2/9/01 | 12/22/0 |
| Source Cat linked to Equipment | AST, ECOM, ICOM, WOOD | ABCL, AGE, CELL, ECOM, FIRE, FLD, ICOM, JET, SPRL, SURF, WOOD | ABCL, AST, DEGR, ECOM, FDSP, FIRE, ICOM, SURF, UST, WOOD | ABCL, AGE, ECOM, FLD, ICOM, INCN, JET, SURF, WOOD | ABCL, AST, CHEM, COOL, DEGR, ECOM, GSOL, HEAT, ICOM, INCN, LAB, SURF, UST, WELD, WOOD | ABCL, CELL, CHEM, DEGR, ECOM, FDSP, ICOM, JET, SURF, WELD, WOOD | ABCL, AST, DEGR, ECOM, FDSP, ICOM, JET, SURF, UST | ABCL, AST, CELL, CHEM, DEGR, ECOM, FDSP, FLD, ICOM, JET, OBOD, RDL, SEAD, SURF, UST, WOOD | ABCL, AGE, AST, DEGR, ECOM, ICOM, SURF, UST, WOOD | ABCL, AST, COOL, DEGR, ECOM, FDSP, FLD, ICOM, JET, SURF, UST, WOOD | ABCL, AGE AST, COOL DEGR, ECOM, ICOM, JET, STER, SURF, UST |




| Criteria Pollutant | Emissions from Significant Sources (TPY) | Threshold Limitations ** (TPY) | Percent Availability | Resource Readiness Rating |
|---|---|---|---|---|
| NOx * | 4.5308 | 50 | 1,104 | RO3 |
| $SO_2$ | 0.027185 | 70 | 367,850 | RO3 |
| $PM_{10}$ | 2.010345 | 50 | 3,482 | RO3 |
| VOCs * | 6.402133 | 50 | 781 | RO3 |
| HAPs | 0.239045 | 25 | 20,917 | RO3 |
| CO | 0.964195 | 50 | 5,186 | RO3 |

* - Most important pollutants for air emission readiness determination. Data taken from most recent annual air emission inventory

** - Threshold limitations as defined by Maricopa County Environmental Services Department, Division of Air Pollution Control

***One Can Only Manage What One Can Measure***

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EESOH Solutions

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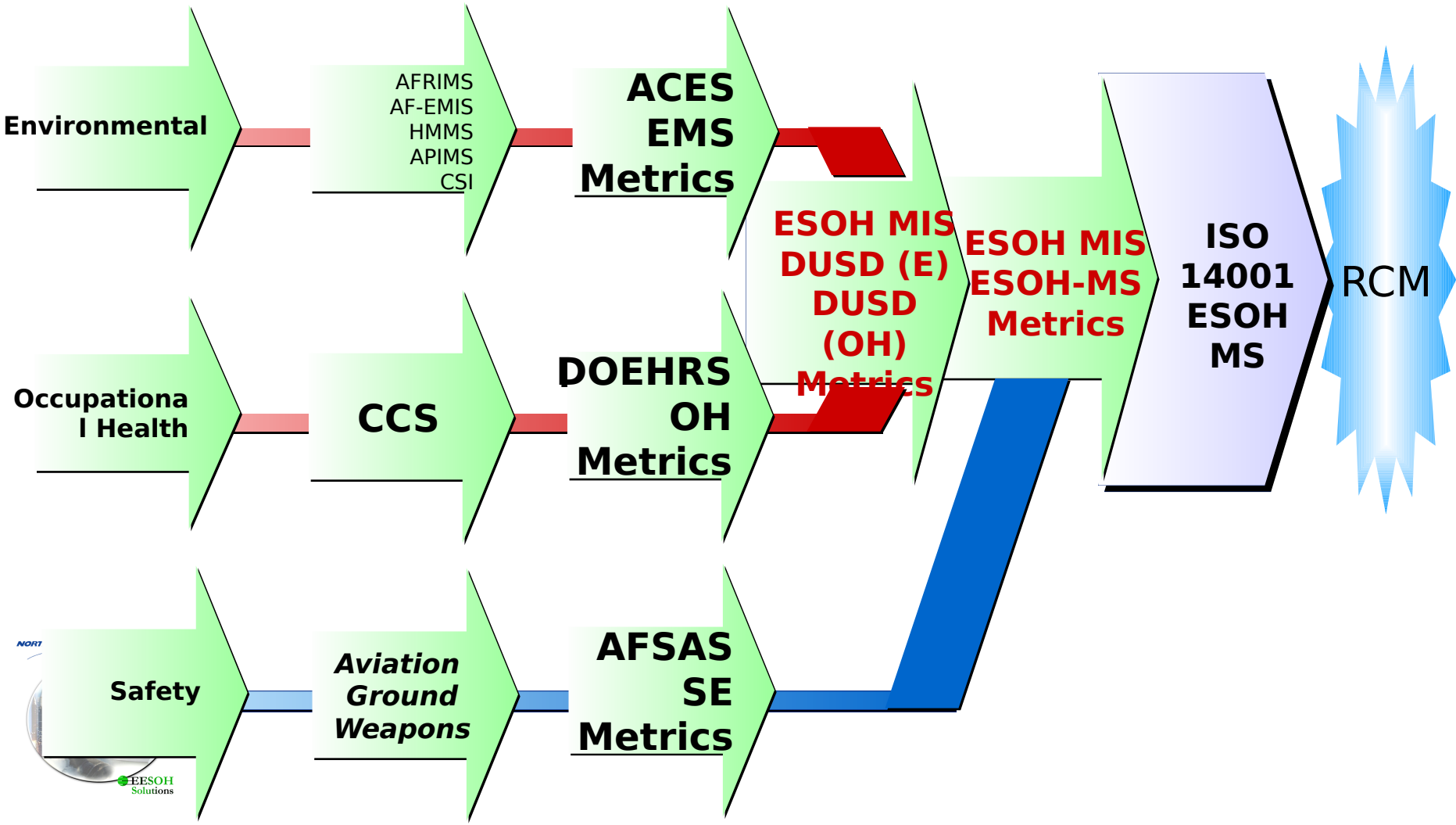
# Supporting the Mission



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# Spiral Development Phases

| Phase 1<br>4 Spirals | Phase 2<br>4 Spirals | Phase 3<br>4 Spirals |
|---|---|---|
| HazMat | Incident Reporting | Natural Resources |
| Air Quality | Pesticides | Cultural Resources |
| HazWaste | ESOH CAMP | ESOH MS |
| EPCRA Reporting | Tanks | EIAP |
| Water | Toxics | Solid Waste |
| Ground Safety | Root Cause | Impact Management |
| Samples | Public Health | Community Health |
| Cleanup | EAPP | Theater Medical |
| Industrial Hygiene | Inspection/ Enforcement | DUSD Reporting |

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# *Why APIMS Now???*

- **APIMS is the Mature and Stable System, Today**
- **CCS – EESOH-MIS interface**
- **BMMP, Activities Modeled from APIMS**
- **Centralize Air Quality Data**
- **Ensure Air Process Are Incorporated Into EESOH-MIS HazMat / HMMP**
- **Reduce Overhead by Managing Processes in HMMP**
- **Increased Knowledge Management**
- **APIMS Data Centrally Funded for Migration to EESOH-MIS**

***An Investment in APIMS Is An Investment In EESOH-MIS***

# Welcome to EESOH

The EESOH system's mission is by sharing information across functional area modules. Single point, validated data entry, captures information at the source, ensuring the highest level of data integrity.

## My Media

- Air Quality (Base Activity)
- EPCRA
- Hazardous Materials
- Hazardous Waste
- Industrial Hygiene (DOEHRS)
- Low-Level Radioactive Waste
- Cleanup
- Water

## Shared Applications

- Administration
- Installation Management

  Tracks information pertaining to all aspects of an installation such as managed in this module including Installations, Facilities, Organizations, Equipment, Inventory Control Points (Shops, Hazmarts, and Other ICP), Locations, and Contracts.
- Interface Management

  Allows the management of the user interface.
- Material Management

  Tracks Materials, Products, Material Safety Data Sheet (MSDS) information, Chemical, Manufacturers/CAGE, Kit Definitions, Exempt List, Blanket Approval List, and Banned List.
- People Management

  Tracks personnel, work assignments, training and personnel readiness.
- Process Management

## Resources

- **EESOH.com**
  Official website of EESOH
- **EESOH Development Portal**
  Review the requirements, join the forum, and preview the current prototype.
- EESOH Help
  Need some help with the application? Get it here.
- EESOH Training
  Lessons, questions and answers to help you master the EESOH application.

## News & Announcements

**Scheduled Maintenance**
*Sep 17, 2003*

We have a scheduled maintenance coming this 24th of September 2003. This downtime will start at 12:01 a.m. and will end at 3:00 a.m. The application will not be available during these hours.

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**Home**

- Work Basket
- My EESOH Portal

**Authorization**

- Process Authorization

ALL

**Your process has been created. More details will have to be provided before it can be submitted for authorization.**

# Edit Process

Visit Forum Discussion

* Indicates a required field.

**Process** | Details | Location | Justification(s) | Material Handling | Material(s) | Waste | Exposure | PPE | Equipment | Contact(s)

**Process Name:** * Painting the Wing

**Common Activity:** * Painting/Coating

**Application Method:** * HVLP Gun

**Process Description:** * This process is used for painting figher planes (usually for maintenance purposes).

Cancel | Save Changes | Submit for Authorization »

# Questions?